

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
13 October 2005 (13.10.2005)

PCT

(10) International Publication Number  
**WO 2005/094655 A3**

(51) International Patent Classification<sup>7</sup>: **B01D 46/52**,  
46/24

(74) Agent: BRUESS, Steven, C.; Merchant & Gould P.C.,  
P.O. Box 2903, Minneapolis, MN 55402-0903 (US).

(21) International Application Number:  
PCT/US2005/009813

(22) International Filing Date: 23 March 2005 (23.03.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/556,133 24 March 2004 (24.03.2004) US

(71) Applicant (for all designated States except US): DON-  
ALDSON COMPANY, INC. [US/US]; 1400 West 94th  
Street, P.O.Box 1299, Minneapolis, MN 55440-1299 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): KRISKO, William,  
J. [US/US]; 11224 Stanley Avenue South, Bloomington,  
MN 55437 (US). BISHOP, Wayne, R., W. [US/US]; 2709  
Salem Avenue South, St. Louis Park, MN 55416 (US).  
GIESEKE, Steven, Scott [US/US]; 6239 Third Avenue  
South, Richfield, MN 55423 (US). NELSON, Benny, K.  
[US/US]; 9385 Gary Avenue, Waconia, MN 55387 (US).

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY,  
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU,  
ZA, ZM, ZW.

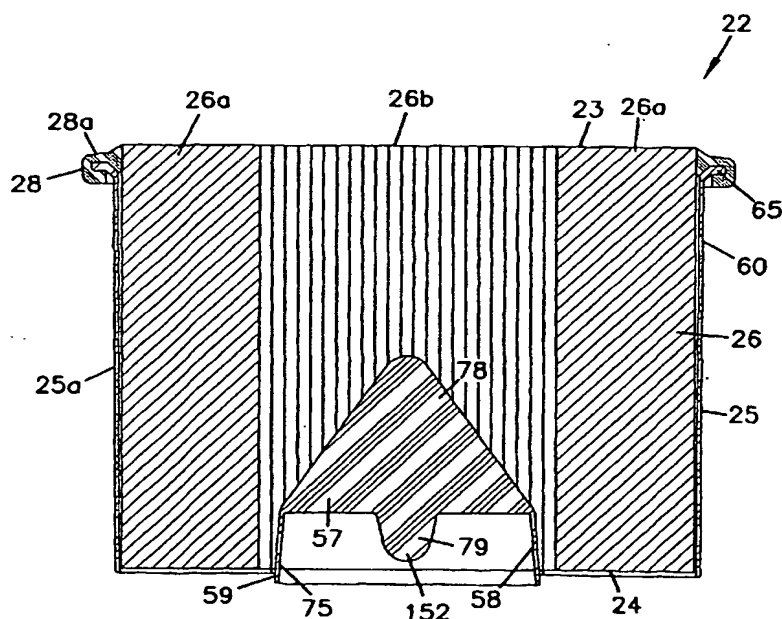
(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,  
SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,  
GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

[Continued on next page]

(54) Title: FILTER ELEMENTS; AIR CLEANER; ASSEMBLY; AND, METHODS



(57) Abstract: A filter cartridge, a safety element and fluid cleaner assembly are described. The fluid cleaner assembly generally includes a housing having a cover and a primary fluid cleaner section. The filter cartridge generally comprises z-filter media, arranged in a straight through configuration. Preferred cartridges include a seal gasket positioned to extend continuously around at outer perimeter of the straight through flow construction. The fluid cleaner assembly can have a pre-cleaner positioned therein. Preferred features are described. Methods of assembly and use are also provided.



— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(88) Date of publication of the international search report:  
12 January 2006